

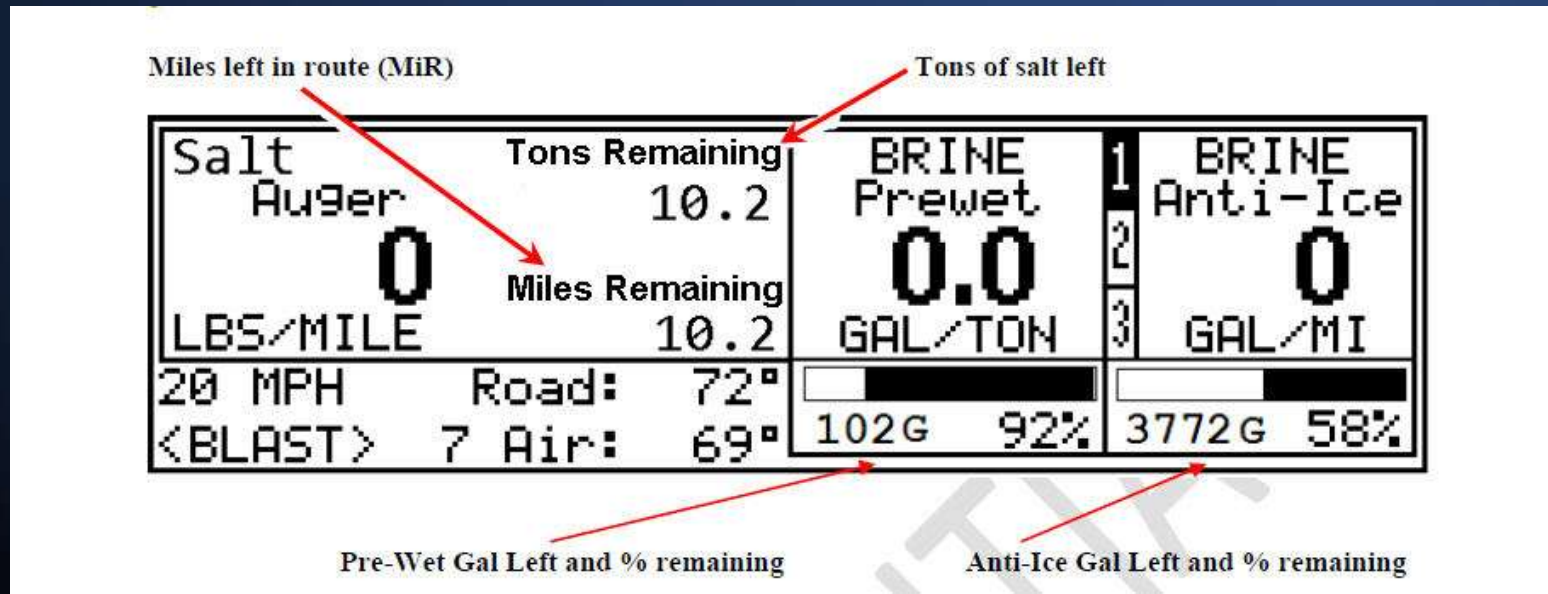
Liquid Anti-icing

- Ron Wolf, District 6 Mechanic, Iowa DOT
- Illinois DOT Districts 2 (Dixon) and 3 (Ottawa)
- Brien Keltner, Anamosa Highway Maintenance Supervisor, Iowa DOT



Liquid/Granular Calculation

- Maximize liquid, minimize granular
 - Operator inputs amount of salt per lane mile
 - Calculator calculates the amount of liquid to use based upon length of run
 - Controller uses all but 10% of the liquid during the run
 - Calculator calculates amount of salt/lane mile in the liquid
 - Controller makes up the rest of needed salt with granular



Wedge-Shaped Brine Tanks



Version 1- Home made system carried up to 3 tanks with 1,800 gallons of total liquid capacity or can also carry 1,200 gallons of liquid and 6-tons of dry material



Version 2- Pengwyn System- carried 6-100 gallon tanks in a medium duty truck with the ability to also carry 6 tons of dry material





Version 3- Henderson System-

900 gallons of liquid in the wedge tanks + 220 in the winter tailgate.

6 tons of granular material can be hauled between the tanks.

Current system employed by Iowa DOT.

Single axle truck version holds 556 gallons and 3.5 tons of granular salt

Trailers

- Increased liquid capacity
- 1,800 gal – 2,700 gal trailers
- 3,500 gal - 6,000 gal tanker
- Safety benefits
- Modifications for carrying brine in storms



Brine Bar with Wedge Tanks

Tandem with Brine Bar

Notice bar does not inhibit trailer hookup



Tandem with Brine Bar & Wedge Tanks



Anti-Ice Trailers



2,700 gallon anti-ice trailers

Anti-Ice Tractor-Trailer



5,000 gallon tanker



Brine Tanks for Radius Bodies

- 900 gallon in-bed tank
- 120 gallon saddle tanks

Frame-mounted Brine Tanks



Frame-mounted Brine Tanks



Frame-mounted Brine Tanks



Frame-mounted Brine Tanks



Chassis-mounted Brine Tanks



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Chassis-mounted Brine Tanks



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Liquid Blending Station

Brine Building housing Brine Maker



Blending Building housing Controls & Pumps



Salt Brine

Calcium Chloride

Liquid Blending Station



Control Panel



Pumps, Flow Meters, & Electronically Actuated Valves

Liquid Blending Station



Let's go see the equipment!